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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of: Markus Thurneysen Reymond Clavel	)	Before the Examiner Donald W. Underwood
Serial No. 10/648,730	)	Group Art Unit: 3652
Filed: August 22, 2003	)	Attorney Docket: WIMA 2
KINEMATIC DEVICE FOR SUPPORT AND PROGRAMMABLE DISPLACEMENT OF A TERMINAL ELEMENT IN A MACHINE OR AN INSTRUMENT	)	August 4, 2008

TRANSMITTAL OF APPEAL BRIEF – 37 C.F.R. §41.37

Mail Stop Appeal Briefs-Patent
Commissioner for Patents
P.O. Box 1450
Arlington, VA 22313-1450

Sir:

1. Transmitted herewith is the APPEAL BRIEF in this application, associated with the Notice of Appeal filed on June 3, 2008.

2. STATUS OF APPLICANT

This application is on behalf of a small entity.

I hereby certify that, on the date shown below, this correspondence is being deposited with the United States Postal Service in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 as "Express Mail Post Office to Addressee."

Express Mail Label No. EV 974926710 US

Kelly A Blaylock
Signature of Person Mailing

Kelly Blaylock
Printed Name of Person Mailing

8/4/08
Date

3. FEE FOR FILING APPEAL BRIEF

Pursuant to 37 C.F.R. §41.20(b)(2), the fee for filing the Appeal Brief is $255.00.

4. EXTENSION OF TERM

None.

5. TOTAL FEE DUE

The total fee due is:

Appeal brief fee $255.00

Extension fee (if any) $0.00

TOTAL FEE DUE $255.00

6. FEE PAYMENT

Authorization is hereby made to charge the amount of $255.00 to the Credit Card as shown on the attached Credit Card information authorization form PTO-2038.

7. FEE DEFICIENCY

If any additional extension and/or fee is required, and/or if any additional fee for claims is required, charge the Credit Card as shown on the attached Credit Card information authorization form PTO-2038.

Respectfully submitted,

Date: August 4, 2008

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APPEAL BRIEF (37 C.F.R. §41.37)

Mail Stop Appeal Briefs-Patent
Commissioner for Patents
P.O. Box 1450
Arlington, VA 22313-1450

Sir:

This Appeal Brief is in furtherance of the Notice of Appeal filed in this case on June 3, 2008, and received by the US Patent and Trademark Office on June 6, 2008. The fees required under §41.20 are dealt with in the accompanying Transmittal of Appeal Brief.

I hereby certify that, on the date shown below, this correspondence is being deposited with the United States Postal Service in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 as "Express Mail Post Office to Addressee."

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Kelly A Blaylock
Signature of Person Mailing

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Printed Name of Person Mailing

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8/4/08
Date

I. REAL PARTY IN INTEREST
(37 C.F.R. §41.37(c)(1)(i))

The real party in interest in this appeal is the Assignee, Willemin Machines S.A.

II. RELATED APPEALS AND INTERFERENCES
(34 C.F.R. §41.37(c)(1)(ii))

With respect to other appeals or interferences that will directly affect, or be directly affected by, or have a bearing on the Board's decision in this appeal, there are none.

III. STATUS OF CLAIMS
(37 C.F.R. §41.37(c)(1)(iii))

The status of the claims in this application are:

A. TOTAL NUMBER OF CLAIMS IN APPLICATION

Claims in the application are 18, 19 and 21.

B. STATUS OF ALL THE CLAIMS

1. Claims cancelled: 1-17, 20, 22-24.
2. Claims withdrawn from consideration but not cancelled: None.
3. Claims objected to: None.
4. Claims allowed or confirmed: 19 and 21
5. Claims rejected: 18.

C. CLAIMS ON APPEAL

The claims on appeal are: 18.

IV. STATUS OF AMENDMENTS
(37 C.F.R. §41.37(c)(1)(iv))

There have been no amendments filed subsequent to final rejection.

V. SUMMARY OF CLAIMED SUBJECT MATTER
(37 C.F.R. §41.37(c)(1)(v))

The references to ¶'s and line numbers that follow are to the present application's specification as published, No. 2004/0052628.

Independent claim 18 claims a kinematic device [e.g., Fig. 1] for supporting and programmably moving **a terminal element** [(21) in Figs. 1-8 and 10; (92) in Fig. 9; see ¶ [0036] lines 24 to 28 and ¶ [0045] line 1 to 7 and ¶ [0070] line 3 to 6] of a machine or an instrument; the kinematic device comprising **a fixed base** [(1) in Figs. 1-8 and 10; see ¶ [0036] line 1 and ¶ [0054] line 1, and ¶ [0059] line 1] that defines a reference plane; **a support and drive structure** [see ¶ [0036] lines 5 to 28; (3), (4), (7), (8), (11), (5), and (6) in Figs. 1-5; see also all of ¶ [0064]; (40), (41), (42), (46), (47), and (21) in Figs. 7 and 8] arranged for moving the **terminal element** at will within a predetermined workspace, the **support and drive structure** comprising **at least two carriages** [see ¶ [0036] line 5 and ¶ [0038] line 3, and ¶ [0045] line 10, and ¶ [0046] lines 4 and 7; see also the *two motor-driven slides* (3) and (4) in Fig. 1; see also ¶ [0047] line 3; the *levers* (3') and (4') in Fig. 10; see also ¶ [0064] line 11; see also the *three motor-driven slides* (40), (41), (42) in Fig. 7 and 8)], that are guided on the **fixed base** for moving with only one degree of freedom defined by an x-axis of the predetermined workspace; **at least two rigid legs** of definite length [see ¶ [0036] lines 12 and 16 and ¶ [0038] line 4; see the two-rigid legs formed by the *pairs of rigid bars* (7) and (8) in Fig. 1; see also ¶ [0037] line 5; see also the *side bar serving to control the degree of freedom along the y-axis* (18) in Fig. 1; see also ¶ [0045] lines 10 and 13; see also ¶

[0059] line 5, referring to Fig.3], **a platform** bearing the **terminal element** [see ¶ [0036] lines 14 and 16; and (11) in Figs. 1-6; see also ¶ [0064] lines 1 to 6; and (50) in Figs. 7-8]; **a support and drive joint arrangement** [see ¶ [0036] line 10; see also the *ball and socket joints* (5) and (6), line 18; and the *ball and socket joints* (9) and (10) in Fig.1-6; see also ¶ [0049] lines 9-10; see also ¶ [0064] lines 15 to 18 with ref. to Fig. 7 and 8] that connects each of the **carriages** to one end of one of the **rigid legs** and the other end of the **rigid legs** to the **platform**; and **an auxiliary structure** [see all of ¶ [0037], ¶ [0038] and ¶ [0042]; (12), (14), (16) and (18) in Figs.1 and 3; and (12'), (14'), (16') and (18') in Fig. 2] that imparts to the **terminal element** a pivoting movement about a pivot axis belonging to the **platform** that displaces the pivot axis parallel to its previous position, with a y orientation perpendicular to the x-axis of the predetermined workspace [see ¶ [0037] lines 3-6, and ¶ [0042] lines 6-11), comprising **an auxiliary carriage** [see ¶ [0038] lines 1-3; and (12) in Fig.1; see also all of ¶ [0047], and (12') in Fig 10; see also ¶ [0048] lines 1-2, and (12'') in Fig. 2; see also ¶ [0066], line 4, and (12'') in Figs. 7 and 8] guided on the **base** for moving with only one degree of freedom, **an auxiliary rigid pivot bar** [see ¶ [0037] line 4, and ¶ [0038] line 1, and (14) in Figs. 1, 3 and 5; see also ¶ [0048] line 3, and (14') in Fig. 2; see also ¶ [0068] line 5, and (14'') in Figs. 7 and 8)] of a fixed length, **a joint connecting one end of the pivot bar to the auxiliary carriage** [see ¶ [0038] line 2, and (13) in Figs. 1, 3 and 5, and (13'') in Fig 7 and 8], and a **transmission structure** [see ¶ [0038] line 5-6, and (15) and (20) in Fig. 1; see also ¶ [0050] line 5-9, and (15), (29), (27), (30) in Fig.3, and (15''), (29''), (27'') and (30'') in Figs. 7 and 8] between the other end of the **pivot bar** and the **platform**, with **a transmission joint** [see ¶ [0038] lines 5-6; (15) in Fig.1-3, and (15'') in Figs. 7 and 8] on the **transmission structure**, for transmitting to the **terminal element** a resultant force in response to a displacement of the **auxiliary carriage** [see ¶ [0039] line 4], the arrangement of the **transmission structure** and

the location of the **transmission joint** with respect to the **platform** being such that the direction of the resultant force at the **transmission joint** remains close to a perpendicular to the line joining the **transmission joint** to the pivot axis for all positions of the **terminal element** within the workspace [see ¶ [0038] lines 7-18 and ¶ [0039] lines 4-10], whereby the **terminal element** is subjected to a usable torque throughout the workspace, regardless of the position of the **terminal element** within the workspace [see ¶ [0039] lines 9-10 and also ¶ [0040]].

Within the kinematic device of claim 18, the **auxiliary carriage** (12) and the **auxiliary rigid pivot bar** (14) provide the pivoting degree of freedom to the **platform** (11) about an axis oriented in a y-direction of the workspace, with both structures (12, 14) moving only linearly from the **base** and in its x-axis, without rotational movement.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL
(37 C.F.R. §41.37(c)(1)(vi))

Claim 18 stands rejected under 35 U.S.C. 102(b) as being clearly anticipated by Fig. 11 of U.S. Patent No. 6,099,217 to Wiegand et al.

VII. ARGUMENT – REJECTIONS UNDER 35 U.S.C. §102(b)
(37 C.F.R. §1.192(c)(8)(iv))

In the Final Office Action mailed December 4, 2007, the Examiner finally rejected claim 18 under 35 U.S.C. §102(b) as being clearly anticipated by Wiegand et al. For the reasons that follow, Applicants appeal the rejection of claim 18 as being anticipated by the Wiegand et al. reference.

The Examiner argues that claim 18 is clearly anticipated by Wiegand et al., by comparing claim 18 with the Fig. 11 embodiment of Wiegand et al., reproduced below, "where element 6a is

the auxiliary carriage and the end of the platform is the transmission structure." (Final Office Action p.2)

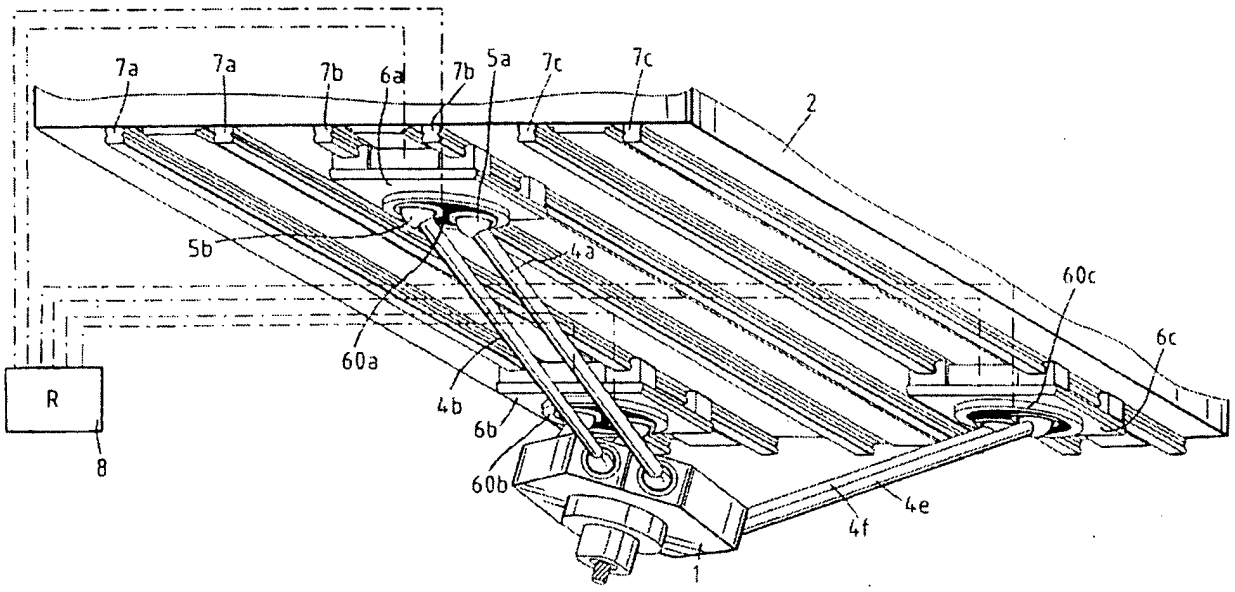
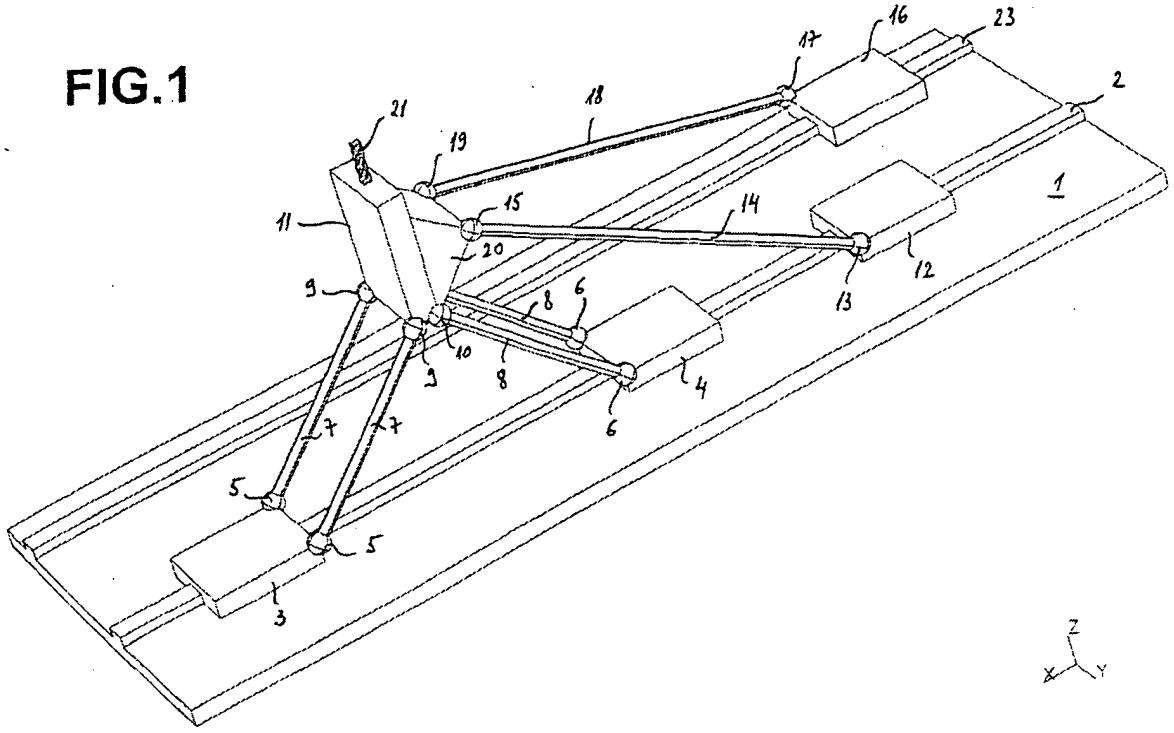


Fig. 11

The kinematic device of claim 18 of the present invention, which is illustrated in Fig. 1 of the present application reproduced below, contains the claim limitation "an auxiliary carriage [12] guided on said base [1] for moving with only one degree of freedom." A rigid pivot bar (14) and a transmission structure (15, 20) are provided between the auxiliary carriage (12) and the platform (11), to provide pivoting movement to platform (11). Neither the auxiliary carriage (12), nor the rigid pivot bar (14), nor the transmission structures (15, 20) have rotating elements. They only transmit linear forces. Accordingly, the auxiliary carriage (12) that is guided linearly on the x-axis of the base (1), which is defined in the specification as moving with one degree of freedom, controls the pivoting movement of the platform (11).

FIG.1



The embodiment of Fig. 11 of Wiegand et al. is totally different. In contrast with the features of the present invention summarised above, and claimed in present Claim 18, Wiegand et al. discloses a device wherein the Wiegand et al. platform (1) is pivoted in a y-oriented axis only by active rotative elements 60a, 60b and 60c.

In Figure 11, Wiegand et al. adds the possibility of pivotal rotation to the embodiment of Fig. 10 of Wiegand et al. but only by providing rotating elements 60a, 60b, and 60c within the linearly moving members 6a, 6b, and 6c. By looking at Fig. 11 of Wiegand et al., and with particular reference to the specification of Wiegand et al. that begins at column 6, line 1, it can be clearly seen that to allow a pivoting movement of the Wiegand et al. platform (1) in a y-oriented axis, Wiegand et al. had to add to carriages 6a, 6b and 6c the actively rotating elements designated 60a, 60b and 60c. Although rotating elements 60a, 60b and 60c surprisingly are not described within the specification of Wiegand et al., it is nevertheless obvious from Fig. 11 that these rotating elements 60a, 60b and 60c do rotate and they must be controlled by the control means (8)

of Wiegand et al., which alone clearly differentiates the kinematic device of claim 18 from Fig. 11 of Wiegand et al., as Claim 18 relies totally on linear motion.

Furthermore, referring to the structure of the kinematic device of claim 18, comprising an auxiliary carriage (12) and a rigid pivot bar (14) for imparting to the platform (11) a pivoting movement around a y-oriented axis, it should also be noted that Wiegand et al. does not teach such an auxiliary structure. In order to have the platform (1) of Wiegand et al. pivoting in a y-oriented axis from the linear movements of carriages 6a, 6b and 6c into any position, it is necessary to have and to rotate the three rotational elements 60a, 60b, and 60c mounted within carriages 6a, 6b, and 6c, all in according with a very special software program. By contrast, the kinematic device of claim 18 moves the auxiliary carriage (12) and rigid pivot bar (14) linearly, not rotationally to accomplish pivotal rotation in the y-oriented axis.

In summary, the limitation of "an auxiliary carriage guided on said base for moving with only one degree of freedom" of claim 18 by itself is sufficient to clearly distinguish the kinematic device of claim 18 from the embodiment of Fig. 11 of Wiegand et al. and its illustrated rotating elements 60a, 60b, and 60c. Wiegand et al. discloses a device wherein the platform (1) is pivoted in the y-oriented axis only by the actions of rotational elements 60a, 60b, and 60c. Claim 18 of the present invention provides such pivotal rotation by linear movements of the auxiliary carriage directly on and in the x-oriented axis of the fixed base.

The above considerations clearly demonstrate that the device of claim 18 of the present application as claimed is not anticipated by the embodiment of Fig. 11 of Wiegand et al., or by any other embodiment described therein.

VIII. APPENDIX OF CLAIMS

(37 C.F.R. §41.37(c)(1)(viii))

The text of the claim involved in the appeal is:

18. A kinematic device for supporting and programmably moving a terminal element in a machine or an instrument, said device comprising a fixed base defining a reference plane, a support and drive structure arranged for moving said terminal element at will within a predetermined workspace, said structure comprising at least two carriages guided on said base for moving with only one degree of freedom defining an x-axis of said workspace, at least two rigid legs of definite length, a platform bearing said terminal element, a support and drive joint arrangement connecting each of the carriages to one end of one of the legs and the other end of the legs to the platform, and an auxiliary structure for imparting to the terminal element a pivoting movement about a pivot axis belonging to the platform that displaces the pivot axis parallel to its previous position, with y orientation perpendicular to said x-axis, comprising an auxiliary carriage guided on said base for moving with only one degree of freedom, an auxiliary rigid pivot bar of fixed length, a joint connecting one end of the pivot bar to the auxiliary carriage, and a transmission structure between the other end of the pivot bar and the platform, with a transmission joint on said transmission structure, for transmitting to the terminal element a resultant force in response to a displacement of said auxiliary carriage, the arrangement of said transmission structure and the location of said transmission joint with respect to the platform being such that the direction of the resultant force at the transmission joint remains close to a perpendicular to the line joining the transmission joint to the pivot axis for all positions of the terminal element within the workspace, whereby said terminal element is subjected to a usable torque throughout the workspace, regardless of the position of the terminal element within said workspace.

IX. APPENDIX OF EVIDENCE
(37 C.F.R. §41.37(c)(1)(ix))

None.

X. APPENDIX OF RELATED DECISIONS
(37 C.F.R. §41.37(c)(1)(x))

None.

Respectfully submitted,

Date: August 4, 2008

By: Clifford W. Browning

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